



# UNITED STATES PATENT AND TRADEMARK OFFICE

*cen*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/760,438

01/20/2004

Caibin Xiao

020354 076P2

9228

33805 7590 03/02/2007  
WEGMAN, HESSLER & VANDERBURG  
6055 ROCKSIDE WOODS BOULEVARD  
SUITE 200  
CLEVELAND, OH 44131

EXAMINER

VALENTIN, JUAN D

ART UNIT

PAPER NUMBER

2877

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|-----------|---------------|
|--|-----------|---------------|

3 MONTHS

03/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/760,438

Applicant(s)

XIAO ET AL.

Examiner

Juan D. Valentin II

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 12/04/2006 have been fully considered but they are not persuasive. See the rejection below which has been maintained.

### *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 9 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a judicial exception, specifically an abstract idea; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, there does not appear to be a tangible result claimed. Merely carrying the steps of identifying; determining; devising; evaluating; quantifying; etc...would not appear to be sufficient to constitute a tangible result, since the outcome of the step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible. To further amplify the rejection, it is noted that the final step (g) of claim 9 is

Art Unit: 2877

“quantifying” (i.e. determining) the analyte concentration. How is this quantifying step carried out in the instant invention? The specification as originally filed reveals that once all the measurements have been made and the information has been collected, some sort of processor or processing medium carries out the step of “quantifying”, that is to say the final step in the instant claim is merely carrying out a mathematical algorithm and claims no practical application (applicants originally filed specification, page 10 paragraph [0044], page 12 paragraph [0047], page 13 paragraph [0049]). Applicant is referred to MPEP § 2106.02 which clearly states:

“In practical terms, claims define nonstatutory processes if they:

- consist solely of mathematical operations without some claimed practical application (i.e., executing a “mathematical algorithm”)

*Practical application that produces a useful, concrete, and tangible result* under Section IV determines whether the claimed invention complies with the subject matter eligibility requirement of 35 U.S.C. Sec. 101, sentence 3, in the OG Notice from 22 November 2005 "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" states “In determining whether the claim is for a “practical application,” the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather that the final result achieved by the claimed invention is “useful, tangible, and concrete.”

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2877

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 rejected under 35 U.S.C. 102(b) as being anticipated by Slovacek et al. (USPN '715, hereinafter Slovacek).

**Claim 1**

Slovacek in conjunction with Figs. 8 & 13, a mounting adapter (Fig. 13, ref. 426), a test element having a wave propagating surface (Fig. 13, ref. 424), said test element being detachably mounted to said adapter, a reagent film immobilized on said test element, said reagent film including at least one internal reference standard having a constant spectral response, at least one light source attached to said adapter, said source being capable of emitting a divergent light beam with a portion of said light beam impinging an edge of said surface at an angle of reflection greater than the critical angle for said surface, said light beam being effective to stimulate a dual light response from said test element and from said reagent film, at least one photo detector attached to said adapter, said detector being capable of detecting said dual light response, and of generating an electronic signal response indicative of said dual light response, and electronic circuit means for processing, storing and transmitting said electronic signal response, and controlling said light source (col. 11, line 15-col. 12, line 4, & col. 15, line 42-col. 16, line 12).

Applicant has argued that Slovacek does not disclose a test element with "a" wave propagating surface. The preamble states "said system comprising:", applicant is reminded that comprising is not an inclusive term, assuming Slovacek has two or more wave propagating surfaces it wouldn't matter because Slovacek clearly show "a" wave propagating surface as claimed by applicant. In response to applicants argument that the sensor of Slovacek does not exhibit a constant spectral response. Examiner notes that while Slovacek might disclose the use

Art Unit: 2877

of a predetermined spectral response, it is noted that once that predetermined spectral response is excited, it's spectral emission (response) is constant at a particular wavelength as clearly disclosed by Slovacek (col. 7, line 33-col. 8, line 11).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-6 & 7-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Slovacek in view of Boss (USPN '288 B1).

**Claims 2-6**

Slovacek substantially teaches the claimed invention except that it fails to show a perforated multi-sectional test element with an integrated clock with an alarm means. Boss shows that it is known to provide a perforated multi-sectional test element with an integrated clock with an alarm means (Figs. 3A, 3B, 4, & 5, col. 2, lines 44-56 & col. 3, line 18-col. 4, line 43) for an chemical detection sensor. It would have been obvious to someone of ordinary skill in the art to combine the device of Slovacek with the perforated multi-sectional test element with integrated clock of Boss for the purposes of providing detection of the occurrence of a chemical reaction in order to record and store measured data.

**Claims 7 & 8**

Slovacek fails to disclose whether the sensors are reversible or non-reversible. However, the advantage and the use of reversible and non-reversible chemical sensors are well known in the art of chemical analyte sensing. Therefore, a mere claiming the use of a reversible and/or non-reversible chemical sensor in conjunction with the disclosed analyte sensor of Slovacek would have been obvious to a person of ordinary skill in the art at the time the invention was made for the purpose of creating a reusable or disposable chemical sensor depending on the particular application the sensor was being used for.

***Allowable Subject Matter***

5. Claim 9 objected to as being a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 10-14 depend from claim 9 and would be allowable if the rejection to claim 9 is overcome.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 2877

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan D. Valentin II whose telephone number is (571) 272-2433. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Juan D Valentin II  
Examiner 2877  
JDV  
February 23, 2007

LAYLA G. LAUCHMAN  
PRIMARY EXAMINER

